

IN THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Change to:

1 - 124. (cancelled without prejudice)

125. (currently amended) A predictive model method, comprising:

using a computer to transform a plurality of data into a predictive model by completing
~~complete~~ the steps of:

accepting a plurality of input that identifies: a data field from the plurality of data that will be modeled and a plurality of data fields from the plurality of data that will be used for a first input data,

receiving the first input data into a plurality of different types of initial predictive models to develop an initial model configuration for each type of model and then selecting an input data set from the plurality of predictive models using a stepwise regression variable selection algorithm after a training of each predictive model type is completed;

receiving the input data set and ~~a second input data~~ as an inputs into a second, induction model stage ~~to transform said input data into that selects a subset of the input data set an improvement to said initial model configuration as an output, said second input data comprising one of said first input data, data not included in said first input data, and a combination thereof;~~ and

receiving said second model stage output as an input into a third predictive model stage to develop a second plurality of different types of predictive models,

identifying a lowest error predictive model from the second plurality of predictive models as a final predictive model and outputting a ~~the~~ final predictive model

where the plurality of data ~~all the input data~~ represents a physical object or substance, and

where said final predictive model supports a regression analysis.

126. (currently amended) The method of claim 125, wherein said second, induction model stage comprises an induction algorithm that receives the ~~second input data~~ and the input data set from the initial model configuration and transforms said inputs into a summary one or more summaries of the subset of the input data set, said summaries comprising the second model stage output.

127. (currently amended) The method of claim 125, wherein the ~~input data set from said initial model configuration comprises the input data to said initial model configuration after the training and a model selection has been completed~~ the second model stage output comprises one or more causal variables that are used as an input to the third predictive model stage only after a check for one or more missing variables has been completed and any missing variables have been identified and incorporated within the second stage output.

128. (previously presented) The method of claim 125, further comprising: using a plurality of independent subpopulations to evolve a plurality of candidate predictive models with a plurality of genetic algorithms to identify a set of one or more changes that will optimize the final predictive model output value for a single criteria or multiple criteria.

129. (currently amended) The method of claim 125, wherein the final predictive model and the types of initial predictive models are selected from the group consisting of classification and regression trees (CART); projection pursuit regression; generalized additive model (GAM), redundant regression network; boosted Naïve Bayes Regression; multivariate adaptive regression splines (MARS); linear regression; neural network; and stepwise regression.

130. (previously presented) The method of claim 126, wherein the induction algorithm is selected from the group consisting of entropy minimization, LaGrange, Bayesian and path analysis.

131. (currently amended) The method of claim 125, wherein ~~a use of a tournament to select a the predictive model type eliminates a need for multiple processing stages~~ the plurality of data that represents a physical object or substance comprises a plurality of processed and unprocessed data that represents a business enterprise that physically exists.

132. (currently amended) The method of claim 125, wherein the ~~final predictive model comprises a transform predictive model~~ variable selection algorithm comprises a stepwise regression algorithm.

133. (currently amended) An apparatus to perform a predictive model method, said apparatus comprising:

means for receiving, processing and storing a plurality of data;

means for completing the ~~three stage~~ predictive model method of claim 125, and
a graphical user interface to allow a user to identify one or more data sources for said predictive modeling method

where the plurality of data represents a physical object or substance, and

where said final predictive model supports a regression analysis.

134. (currently amended) The apparatus of claim 133, wherein said ~~second, induction model stage~~ comprises an induction algorithm that receives the ~~second input data and the input data set from the initial model configuration and transforms said inputs into a summary one or more summaries of the subset of the input data set, said summaries comprising the second model stage output.~~

135. (currently amended) The apparatus of claim 133, wherein the ~~input data set from said initial model configuration comprises the input data to said initial model configuration after the training and a model selection has been completed~~ the second model stage output comprises one or more causal variables that are used as an input to the third predictive model stage only after a check for one or more missing variables has been completed and any missing variables have been identified and incorporated within the second stage output.

136. (previously presented) The apparatus of claim 133, further comprising: using a plurality of independent subpopulations to evolve a plurality of candidate predictive models with a plurality of genetic algorithms to identify a set of one or more changes that will optimize the final predictive model output value for a single criteria or multiple criteria.

137. (currently amended) The apparatus of claim 133, wherein the final predictive model and the types of initial predictive models are selected from the group consisting of classification and regression trees (CART); projection pursuit regression; generalized additive model (GAM), redundant regression network; boosted Naïve Bayes Regression; multivariate adaptive regression splines (MARS); linear regression; neural network; and stepwise regression.

138. (previously presented) The apparatus of claim 134, wherein the induction algorithm is selected from the group consisting of entropy minimization, LaGrange, Bayesian and path analysis.

139. (currently amended) The apparatus of claim 133, wherein the ~~use of a tournament to select~~

~~the predictive model type eliminates a need for multiple processing stages plurality of data consists of a plurality of unprocessed and processed data representative of a business enterprise that physically exists.~~

140. (currently amended) A non-transitory, computermachine-readable medium tangibly embodying a program of computermachine-readable instructions executable by a digital processing apparatus to perform a predictive model method, comprising: processor in the computer, which when executed by said processor transform a plurality of data into a predictive model by:

accepting a plurality of input that identifies: a data field from the plurality of data that will be modeled and a plurality of data fields from the plurality of data that will be used for a first input data,

receiving the first input data into a plurality of different types of initial predictive models to develop an initial model configuration for each type of model and then selecting an input data set from the plurality of predictive models using a stepwise regression variable selection algorithm after a training of each predictive model type is completed;

receiving the input data set and ~~a second input data~~ as an inputs into a second, induction model stage to ~~transform said input data into~~ that selects a subset of the input data set an improvement to said initial model configuration as an output, and

receiving said second model stage output as an input into a third predictive model stage to develop a second plurality of different types of predictive models,

identifying a lowest error predictive model from the second plurality of predictive models as a final predictive model and outputting a the final predictive model

where said final predictive model supports a regression analysis.

141. (currently amended) The computer machine readable medium of claim 140, wherein said ~~second, induction~~ model stage comprises an induction algorithm that receives the ~~second input data~~ and the input data set from the initial model configuration and transforms said inputs into a summary one or more summaries of the subset of the input data set, said summaries comprising the second model stage output.

142. (currently amended) The computer machine readable medium of claim 140, wherein the ~~input data set from said initial model configuration comprises the input data to said initial model configuration after the training and a model selection has been completed~~ the second model

stage output comprises one or more causal variables that are used as an input to the third predictive model stage after a check for one or more missing variables has been completed and any missing variables have been identified and incorporated within the second stage output.

143. (currently amended) The computer machine readable medium of claim 140, further comprising: using a plurality of independent subpopulations to evolve a plurality of candidate predictive models with a plurality of genetic algorithms to identify a set of one or more changes that will optimize the final predictive model output value for a single criteria or multiple criteria.

144. (currently amended) The computer machine readable medium of claim 140, wherein the final predictive model and the types of initial predictive models are selected from the group consisting of classification and regression trees (CART); projection pursuit regression; generalized additive model (GAM), redundant regression network; boosted Naïve Bayes Regression; multivariate adaptive regression splines (MARS); linear regression; neural network; and stepwise regression.

145. (currently amended) The computer machine readable medium of claim 141, wherein the induction algorithm is selected from the group consisting of entropy minimization, LaGrange, Bayesian and path analysis.

146. (currently amended) The computer machine readable medium of claim 140, wherein the ~~use of a tournament to select the predictive model type eliminates a need for multiple processing stages~~ variable selection algorithm comprises a stepwise regression algorithm.

147. (currently amended) The computer machine readable medium of claim 140, wherein ~~all the input data represents a physical object or substance~~ the plurality of data is representative of a physical object or substance where said data comprises a plurality of processed and unprocessed data that represents a business enterprise that physically exists.

148. (currently amended) ~~A computing infrastructure, comprising the machine-readable medium of claim 140 integrated into the computing apparatus of claim 133, wherein the medium in combination with the apparatus is capable of performing the method of claim 125~~ computer program product, comprising a computer readable storage medium having a non transitory, computer readable program code tangibly stored therein, said program code configured to be

executed by a processor of a computer system in order to transform a plurality data representative of a physical object or substance into a predictive model by:

accepting a plurality of input that identifies: a data field from a plurality of data that will be modeled and a plurality of data fields from the plurality of data that will be used for a first input data,

receiving the first input data into a plurality of different types of initial predictive models to develop an initial model configuration for each type of model and then selecting an input data set from the plurality of predictive models using a variable selection algorithm after a training of each predictive model type is completed;

receiving the input data set as inputs into a second model stage that transforms a subset of the input data set into an output, and

receiving said second model stage output as an input into a third predictive model stage to develop a second plurality of different types of predictive models,

identifying a lowest error predictive model from the second plurality of predictive models as a final predictive model and outputting the final predictive model

where said final predictive model supports a regression analysis.

149. (currently amended) ~~The computing infrastructure of claim 148, wherein a second model stage transforms one or more data inputs into a summary for use in a final mode~~ computer program product of claim 148, wherein said second model stage comprises an induction algorithm that receives the the input data set from the initial model configuration and transforms said inputs into a summary of a causal subset of the input data set.

150. (currently amended) ~~The computing infrastructure of claim 148 that is capable of performing the method of claim 138~~ computer program product of claim 148, further comprising: using a plurality of independent subpopulations to evolve a plurality of candidate predictive models with a plurality of genetic algorithms to identify a set of one or more changes that will optimize the final predictive model output value for a single criteria or multiple criteria.

151. (new) The computer program product of claim 148, wherein the final predictive model and the types of initial predictive models are selected from the group consisting of classification and regression trees (CART); projection pursuit regression; generalized additive model (GAM), redundant regression network; boosted Naïve Bayes Regression; multivariate adaptive regression splines (MARS); linear regression; neural network; and stepwise regression.

152. (new) The computer program product of claim 149, wherein the induction algorithm is selected from the group consisting of entropy minimization, LaGrange, Bayesian and path analysis.

153. (new) The computer program product of claim 148, wherein the variable selection algorithm comprises a stepwise regression algorithm.

154. (new) The computer program product of claim 148, wherein the second model stage output is used as an input to the third predictive model stage after a check for one or more missing variables has been completed and any missing variables have been identified and incorporated within the second stage output.

155. (new) The computer program product of claim 148, wherein the physical object or substance comprises a business enterprise that physically exists.